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Application No: 10542284 Version No: 2.0

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<110> Wyeth Holdings Corporation

Farley, John Erwin

Hoiseth, Susan Kay

<120> METHODS FOR INCREASING NEISSERIA PROTEIN EXPRESSION AND  
COMPOSITIONS THEREOF

<130> AM100238

<140> 10542284

<141> 2006-11-15

<150> PCT/US04/000800

<151> 2004-01-13

<150> 60/440,244

<151> 2005-01-15

<160> 99

<170> PatentIn version 3.4

<210> 1

<211> 1110

<212> DNA

<213> Neisseria meningitidis (group B)

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tcccagtg	gcaacaggga	atcctttatc	ggcttgccag	gcgaattcgg	tacgctgcgc	300
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<212> PRT

<213> Neisseria meningitidis (group B)

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Val Thr Lys Arg Lys Ser Arg Ile Arg Thr Lys Ile Ser Asp Phe Gly  
35 40 45

Ser Phe Ile Gly Phe Lys Gly Ser Glu Asp Leu Gly Glu Gly Leu Lys  
50 55 60

Ala Val Trp Gln Leu Glu Gln Asp Val Ser Val Ala Gly Gly Gly Ala  
65 70 75 80

Ser Gln Trp Gly Asn Arg Glu Ser Phe Ile Gly Leu Ala Gly Glu Phe  
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Gly Thr Leu Arg Ala Gly Arg Val Ala Asn Gln Phe Asp Asp Ala Ser  
100 105 110

Gln Ala Ile Asp Pro Trp Asp Ser Asn Asn Asp Val Ala Ser Gln Leu  
115 120 125

Gly Ile Phe Lys Arg His Asp Asp Met Ser Val Ser Val Arg Tyr Asp  
130 135 140

Ser Pro Glu Phe Ser Gly Phe Ser Gly Ser Val Gln Phe Val Pro Ala  
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Gln Asn Ser Lys Ser Ala Tyr Thr Pro Ala His Phe Val Gln Asn Lys  
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Gln Asn Gln Arg Pro Thr Leu Val Pro Ala Val Val Gly Lys Pro Gly  
180 185 190

Ser Asp Val Tyr Tyr Ala Gly Leu Asn Tyr Lys Asn Gly Gly Phe Ala  
195 200 205

Gly Asn Tyr Ala Phe Lys Tyr Ala Lys His Ala Asn Val Gly Arg Asp  
210 215 220

Ala Phe Glu Leu Phe Leu Ile Gly Ser Ala Thr Ser Asp Glu Ala Lys  
225 230 235 240

Gly Thr Asp Pro Leu Lys Asn His Gln Val His Arg Leu Thr Gly Gly  
245 250 255

Tyr Glu Glu Gly Gly Leu Asn Leu Ala Leu Ala Ala Gln Leu Asp Leu  
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Ser Glu Asn Gly Asp Lys Ala Lys Thr Lys Asn Ser Thr Thr Glu Ile  
275 280 285

Ala Ala Thr Ala Ser Tyr Arg Phe Gly Asn Ala Val Pro Arg Ile Ser  
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Tyr Ala His Gly Phe Asp Leu Ile Glu Arg Gly Lys Lys Gly Glu Asn  
305 310 315 320

Thr Ser Tyr Asp Gln Ile Ile Ala Gly Val Asp Tyr Asp Phe Ser Lys  
325 330 335

Arg Thr Ser Ala Ile Val Ser Gly Ala Trp Leu Lys Arg Asn Thr Gly  
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<211> 1104

<212> DNA

<213> *Neisseria meningitidis* (group B)

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<210> 4

<211> 368

<212> PRT

<213> *Neisseria meningitidis* (group B)

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Gln Val Thr Lys Arg Lys Ser Arg Ile Arg Thr Lys Ile Ser Asp Phe  
35 40 45

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Ala	Thr	Arg	Trp	Gly	Asn	Arg	Glu	Ser	Phe	Val	Gly	Leu	Ala	Gly	Glu
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Phe	Gly	Thr	Leu	Arg	Ala	Gly	Arg	Val	Ala	Asn	Gln	Phe	Asp	Asp	Ala
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Ser	Lys	Ala	Ile	Asp	Pro	Trp	Asp	Ser	Asn	Asn	Val	Val	Ala	Ser	Gln
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Ser	Ala	Ile	Val	Ser	Gly	Ala	Trp	Leu	Lys	Arg	Asn	Thr	Gly	Ile	Gly
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<211> 1122

<212> DNA

<213> *Neisseria meningitidis* (group B)

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<213> *Neisseria meningitidis* (group B)

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          35          40          45
Arg Thr Lys Ile Ser Asp Phe Gly Ser Phe Ile Gly Phe Lys Gly Ser
          50          55          60
Glu Asp Leu Gly Asp Gly Leu Lys Ala Val Trp Gln Leu Glu Gln Asp
65          70          75          80
Val Ser Val Ala Gly Gly Gly Ala Thr Gln Trp Gly Asn Arg Glu Ser
          85          90          95
Phe Ile Gly Leu Ala Gly Glu Phe Gly Thr Leu Arg Ala Gly Arg Val
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Ala Asn Gln Phe Asp Asp Ala Ser Gln Ala Ile Asp Pro Trp Asp Ser
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Pro Ala Tyr Tyr Thr Lys Asp Thr Asn Asn Asn Leu Thr Leu Val Pro
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          195          200          205
Tyr Lys Asn Gly Gly Phe Ala Gly Asn Tyr Ala Phe Lys Tyr Ala Arg
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His Ala Asn Val Gly Arg Asn Ala Phe Glu Leu Phe Leu Ile Gly Ser
225          230          235          240
Gly Ser Asp Gln Ala Lys Gly Thr Asp Pro Leu Lys Asn His Gln Val
          245          250          255
His Arg Leu Thr Gly Gly Tyr Glu Glu Gly Gly Leu Asn Leu Ala Leu
          260          265          270
Ala Ala Gln Leu Asp Leu Ser Glu Asn Gly Asp Lys Thr Lys Asn Ser
          275          280          285
Thr Thr Glu Ile Ala Ala Thr Ala Ser Tyr Arg Phe Gly Asn Ala Val
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Ser Gly Gln Val Lys Val Thr Lys Ala Lys Ser Arg Ile Arg Thr Lys
          35          40          45
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          50          55          60
Gly Glu Gly Leu Lys Ala Val Trp Gln Leu Glu Gln Asp Val Ser Val
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Ala Gly Gly Gly Ala Thr Gln Trp Gly Asn Arg Glu Ser Phe Ile Gly
          85          90          95
Leu Ala Gly Glu Phe Gly Thr Leu Arg Ala Gly Arg Val Ala Asn Gln
          100          105          110
Phe Asp Asp Ala Ser Gln Ala Ile Asp Pro Trp Asp Ser Asn Asn Asp
          115          120          125
Val Ala Ser Gln Leu Gly Ile Phe Lys Arg His Asp Asp Met Pro Val

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				165					170					175	
Val	Val	Val	Asn	Asn	Lys	Val	Ala	Thr	His	Val	Pro	Ala	Val	Val	Gly
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Lys	Pro	Gly	Ser	Asp	Val	Tyr	Tyr	Ala	Gly	Leu	Asn	Tyr	Lys	Asn	Gly
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Gly	Phe	Ala	Gly	Asn	Tyr	Ala	Phe	Lys	Tyr	Ala	Arg	His	Ala	Asn	Val
	210					215				220					
Gly	Arg	Asn	Ala	Phe	Glu	Leu	Phe	Leu	Ile	Gly	Ser	Ala	Thr	Ser	Asp
225					230					235					240
Gln	Ala	Lys	Gly	Thr	Asp	Pro	Leu	Lys	Asn	His	Gln	Val	His	Arg	Leu
				245					250					255	
Thr	Gly	Gly	Tyr	Glu	Glu	Gly	Gly	Leu	Asn	Leu	Ala	Leu	Ala	Ala	Gln
			260					265					270		
Leu	Asp	Leu	Ser	Glu	Asn	Ala	Asp	Lys	Thr	Lys	Asn	Ser	Thr	Th	